

AMENDMENTS TO THE CLAIMS

Claims 1-6: (canceled).

Claim 7 (currently amended): A method for forming a miniaarray on a miniaarray substrate, said miniaarray comprises comprising locations or spots that contain an analyte specific reagent for detecting an analyte in a sample, said method comprises the steps of:

- (a) aspirating a solution of each analyte specific reagent ~~with~~ into ~~a~~ pipette-based dispensers comprising pipette tips, said dispensers connected to a syringe pump;
- (b) pressuring small defined droplets of said analyte specific reagent from the pipette tips of said pipette-based dispensers;
- (c) touching said droplets to said miniaarray substrate and releasing causing said droplets to release through gravity, thereby spotting specific locations or spots on said substrate with a specific volume of said analyte specific reagent, wherein said locations or spots have a center-to-center spacing of in the range of 1 mm to 3 mm; and
- (d) repeating steps (a) to (c) until said miniaarray is fabricated.

Claim 8: (canceled).

Claim 9 (currently amended): The method of claim 7, wherein said pipette-based dispensers are arranged in one or two rows.

Claim 10: (currently amended): The method of claim 7, wherein said pipette-based dispensers can operate simultaneously to load microliter quantities of sample reagents in

solution and to dispense nanoliter quantities of said reagent solutions on the surface of the miniaarray substrate.

Claim 11 (currently amended): The method of claim 7, wherein said pipette-based dispensers have tips selected from the group consisting of disposable tips that can be ejected and replaced automatically and or fixed tips that are cleaned and dried between sample loadings.

Claim 12 (currently amended): The method of claim 7, wherein releasing of causing said droplet to release through gravity is performed by increasing pressure on said defined droplet to ejecting sufficient volume from the tips of said pipette-based dispensers to cause said droplet to release by gravity.

Claim 13 (currently amended): The method of claim 7, wherein releasing of causing said droplet to release through gravity is performed by applying an electromechanical force to the tips of said pipette-based dispensers to cause said droplet to release by gravity, wherein said electromechanical force is selected from the group consisting of vibration, piezoelectric pressure, and rapid mechanical actuation.

Claim 14 (currently amended): The method of claim 7, wherein said pipette-based dispensers are carried by a robotically controlled apparatus that provides lateral and vertical motions, thereby automating the loading of multiple reagent samples, the replacement or

cleaning of the pipette tips, and the spotting of multiple miniarrays under programmed instructions.

Claim 15 (original): The method of claim 7, wherein said miniarray achieves a smaller, more condensed distribution by interspersing successive dispensing of reagents onto the array in regions between the spots dispensed previously.

Claim 16: (currently amended): The method of claim 7, wherein the pipette tips of said pipette-based dispensers are spaced 9 mm or 4.5 mm center to center to load multiple reagent samples from standard 96 well or 384 well plates.

Claim 17 (currently amended): The method of claim 7, wherein said pipette-based dispensers are stationary, except for vertical motion, and miniarray substrates and reagent samples are moved under said dispensers by a robotic apparatus that moves under programmed instructions.

Claim 18. (original) The method of claim 7, wherein said miniarray substrate is selected from the group consisting of coated microscope slides, flexible membranes, rigid glass, plastics, semi-rigid film, paper-based printing substrates, semi-rigid printing materials, photographic paper and high quality computer printing papers.

Claims 19-54: (canceled).